STIC Search Report
EIC 1700

STIC Database Tracking Number: 134432

TO: Helen Pezzuto
Location: REM 10A29
Art Unit : 1713
October 6, 2004

Case Serial Number: 09/831057

From: Kathleen Fuller
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov

Search Notes

STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

Please Give Request To Ms. R. Fuller Thanks!

Access DB# 134432

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Helen Pezzuto Examiner #: 70058 Date: 10/5/04
Art Unit: 1713 Phone Number ~~30~~ 2-1108 Serial Number: 09/831,057
Mail Box and Bldg/Room Location: REM-10A29 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: SEE ATTACHED

Inventors (please provide full names):

Earliest Priority Filing Date: 11/6/98

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

- A surfactant monomer defined in claim 1, formed from reacting a unsat'd carboxylic acid and an alkylene oxide in the presence of Lewis acid catalyst (i.e. boron trifluoride (BF_3) → C17) and ~~them~~ hydroquinone (claim 21), follow by phosphation with phosphorus pentoxide!
- reactive polymerized surfactant (emulsion polymerization) is used in "coating" application

Ex: methacrylic acid + propylene oxide + boron trifluoride + hydroquinone $\xrightarrow{\text{phosphorus pentoxide}}$ surfactant

Key words:
coating, emulsion, Lewis acid (BF_3) catalyst

Many Thanks!

=> FILE REG
FILE 'REGISTRY' ENTERED AT 10:24:01 ON 06 OCT 2004

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 4 OCT 2004 HIGHEST RN 756793-93-8
DICTIONARY FILE UPDATES: 4 OCT 2004 HIGHEST RN 756793-93-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

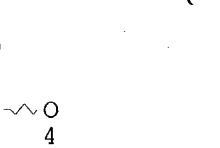
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 10:24:05 ON 06 OCT 2004

FILE COVERS 1907 - 6 Oct 2004 VOL 141 ISS 15
FILE LAST UPDATED: 5 Oct 2004 (20041005/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L19
L3 STR

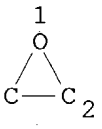


NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

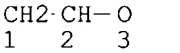
STEREO ATTRIBUTES: NONE
L4 STR 2



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 3

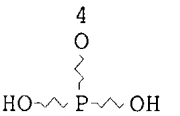
STEREO ATTRIBUTES: NONE
L5 STR 3



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE
L6 STR 4



4,810 structures from queries 1 and (2 or 3) and 4

NODE ATTRIBUTES:
CONNECT IS E1 RC AT 4
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE
L10 4810 SEA FILE=REGISTRY SSS FUL L3 AND (L4 OR L5) AND L6
L11 2744 SEA FILE=HCAPLUS ABB=ON L10
L12 1229 SEA FILE=HCAPLUS ABB=ON L11(L)(PREP OR IMF OR SPN)/RL
L13 16 SEA FILE=HCAPLUS ABB=ON L12(L)SURFACT?

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L15          37 SEA FILE=HCAPLUS ABB=ON  L12 AND SURFACT?/IT
L16          37 SEA FILE=HCAPLUS ABB=ON  L13 OR L15
L17          13 SEA FILE=HCAPLUS ABB=ON  L16 AND COATING?/SC,SX,AB,BI
L18          18 SEA FILE=HCAPLUS ABB=ON  L16 AND POLYMERI?(4A)SURFACT?
L19          25 SEA FILE=HCAPLUS ABB=ON  L17 OR L18
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25 CA references with utility

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=> D L19 BIB ABS IND HITSTR 1-25

L19  ANSWER 1 OF 25  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:705115  HCAPLUS
DN   139:231637
TI   Coating compositions for ink-jet recording sheets and ink-jet
     recording sheets with good gloss, ink receptability, and transparence
IN   Takeuchi, Shuji; Oshiki, Junji
PA   Arakawa Chemical Industries, Ltd., Japan
SO   Jpn. Kokai Tokkyo Koho, 9 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.          DATE
     ---------------     ----   --------    --------------------     --------
PI   JP 2003251934        A2    20030909    JP 2002-364603           20021217
PRAI JP 2001-392022       A     20011225
AB   Title compns. comprise (A) cationic crosslinked polymer fine particle aqueous
     dispersions with average particle diameter 20-300 nm obtained by coagulation of
     (B) cationic crosslinked polymer fine particle aqueous dispersion with average
     particle diameter 10-200 nm obtained by emulsion polymerization of unsatd.
monomers
     in the presence of tertiary amino or quaternary ammonium group-containing
     cationic polymers with (C) compds. having coagulation properties against
     B, where the average particle diameter ratio of A/B = 1.01-1.50.  Thus, 100
parts
     25%-solids cationic crosslinked polymer fine particle aqueous dispersion with
     average particle diameter 70 nm obtained from styrene, Me methacrylate,
     N,N-dimethylaminoethyl methacrylate, glycidyl methacrylate, and divinyl
     benzene and 25.0 parts 1%-solids anionic crosslinked polymer fine particle
     aqueous dispersion with average particle diameter 70 nm obtained from Me
methacrylate
     New Frontier S 510, and Eleminol JS 2 were mixed to give 20%-solids
     cationic polymer particle aqueous dispersion with average particle diameter 85
nm,
     100 parts of which was mixed with 50 parts 10% aqueous PVA 217 solution,
applied
     on a paper and a transparent OHP film, and used for ink-jet printing,
     showing good ink receptability, gloss 85 for paper, and transparency 86
     for OHP film.
IC   ICM  B41M005-00
     ICS  B41J002-01
CC   38-3 (Plastics Fabrication and Uses)
     Section cross-reference(s): 42, 43, 74
ST   coating compn ink jet recording sheet gloss receptability
     transparence; quaternized acrylic styrene copolymer coagulation
IT   Polyelectrolytes
       Surfactants
       (anionic, coagulation agent for cationic polymer; preparation of cationic
       polymer coating compns. for ink-jet recording sheets)
IT   Polyelectrolytes
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